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A Survey on using online database by faculty members and graduate students at Shahid Beheshti University

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Abstract

Currtent paper study on using Shahid Beheshti's subscribed database by faculty members and graduate students of this University.This is a survey study with descriptive approach. The population of the study, 780 faculty members and 2,300 students graduate Shahid Beheshti University who this number using Morgan table for sampling 330 graduate students and 260 faculty members randomly stratified the samples were selected. Subscried databases Persian and Latin at the University martyr Beheshti also were examined. For data gathering the questionnaire and log files were used. Current study indicated that the indicators like amount of using and the degree of satisfaction of databases success rate by users interact with the base in this study of middle-level users, as well as faculty members and Shahid Beheshti University graduate students about the need for training in the use of shared databases positive. The most frequent users of faculty members with expertise in computer science and academic rank of associate professor and graduate students with educational science, physics and chemistry and a master's degree. Current research revealed that Sciencedirect and Magiran had the most use by users.

Keywords: Shahid Beheshti University; Graduate students; Faculty Members

Introduction

Iranian research and academic centers have provided information databases since the 1990s, and now, by providing electronic databases, Iranian academic libraries try to provide faculty members and students with the latest scientific information (Jowkar and adaehghani, 2006, p. 83). The importance of this issue is double in the field of medicine and related matters, which deals with the health of humans, in addition to educational, research and creating content issues, the correct and principled treatment of patients is also possible using and studing updated information. The databases that universities share in and provide to their researchers are one of information systems types that can be studied the use rate of them. Nowadays, the collection creation program of many libraries and research centers involves purchasing electronic resources and sharing relevant resources. Meanwhile, the studies of users of these electronic resources are considered as necessary for libraries and research centers in terms of the frequency of use, the reasons for using these resources, the types of use of these resources, the views and thoughts of the user on the sources, types of the use ofthese resources, the epinions of users about these resources, the rate and reasons of user satisfaction, unmet needs and demographic data. Voorbij and Ongerin (2006) believe that only user studies can reveal the motivations, beliefs, aspirations and

problems of users in the use of information resources. This study is necessary to help the officials of Shahid Beheshti University's information centers to adopt policies for choosing and providing electronic resources, including databases based on users' demand.

This study aimed to determine the used rate the shared databases by faculty members and graduate students of Shahid Beheshti University. The sub-objectives of this study are:

1. Identifying the use rate the shared databases by faculty members and graduate students of Shahid Beheshti University and determining the reasons for using these databases by these individuals.

2. Determining the rate of the user's success in interacting with the Shahid Beheshti University's shared databases and identifying the strengths and weaknesses of access to these databases in response to user's needs.

3. Determining the estimated information needs of faculty members and graduate students of Shahid Beheshti University by Shahid Beheshti University's shared databases.

4. Identifying the main motive to search information in Shahid Beheshti University's shared databases by faculty members and graduate students of this university.

5. Identifying the restrictive factors in the optimal use of Shahid Beheshti University's shared databases by faculty members and graduate students of this university.

6. Identifying the attitudes of faculty members and graduate students of Shahid Beheshti University about the need to train the use of Shared Beheshti University's shared databases.

7. Identify the rate of faculty members and graduate students' satisfaction or dissatisfaction of Shahid Beheshti University from shared databases of this university

8. Determining the most used and least used shared database of Shahid Beheshti University.

Several studies have been conducted on utilizing the shared electronic resources. In a study titled "investigating the use rate of Ankara University's faculty members from the digital library, Atilgan, D., & D. Bayram (2006) concluded that most faculty members are aware of the shared information sources. Their research showed that the most used databases of Ankara University's faculty members were ISI, Ebsco, ScienceDirect; also the research was most important reason for using these databases. The main reasons of respondents in the lack of use of databases were unawareness how to use the databases and

meet the information needs through other sources. Angel Borrego et al. (2007) reviewed the faculty members in the Consortium of Catalonia University Library for the use of electronic journals. Aboue 95% of studied individuals stated that they are very familiar with electronic journals, and 52% of them mainly use electronic journals. The main reasons of those who did not use electronic journals were the lack of familiarity with these journals and the lack of electronic journals with association with their disciplines. In response to the preference of electronic journals on printed journals, 76% of respondents expressed that they preferable the electronic version if there are both print version and electronic version of a journal. Kayaoglu (2008) reviwed the use of electronic journals by the faculty members of Istanbul University, Turkey. Most of the participants in his study expressed that they use e-journals a lot; he also found that there is a significant relationship between the use of e-journals and the field of study of individuals. The users of these resources, who were the student of basic science and medical, used them for training, flipping, research and updating themselves, and the students of human sciences did not use the resources. From the faculty members' view, the most important advantages of e-journals in comparison with printed journals included the twenty-four-hour access to these journals, no need to attend in library, accessing to past numbers, being meta-text of journals, and accessing the more up-to-date versions. Trivedi, M., & A. Joshi (2009) found in a study titled "the use of e-journals versus printed journals by medical researchers at the HM Patel of Medical Sciences, that most researchers use e-journals as much as print journals. This study showed major problems in the lack of optimal use of e-journals, the lack of computer skills, the inability to retrieve accurate and appropriate medical information through various databases such as ScienceDirect, Ebsco, ProQuest, etc.; also, the technical defects posed by this study are reasons for non-use of e-journals such as low download speed, slowness of connection and physical pressure on the eyes. Ahmed (2013) has studied the rate of students' use and satisfaction with shared e-resources in two specialized universities in Bangladesh. This study showed that the main problems for accessing the students to e-resources are limited access to computers and low download speed, which is related to the weak information and communication infrastructure, as well as the unwillingness of students to regularly use these resources. MaxData (2007) used U.S.I. researchers' log file analysis method to determine the rate of use of Ohiolink database by academic users. The findings of this study showed that there are differences between searching information and its usage in universities and research institutes, which, to a large extent, are subject to research activities and the number of users.

Latifi and Osareh (2010) concluded in a study titled 'Identifying the information needs of graduate students at Bu-Ali Sina University, Hamadan, by emphasis on the available databases in this university

includes Rose-net Digital Library and Daneshyar Bases and using the questionnaire, that the main purposes of the students are to search information, find out the background for doing research and study projects. Among the existing e-databases, the importance of Elsevier/ScienceDirect is higher (89.2%), afterward Springer, ISI, Scopus, ProQuest, ACS, Oxford Journals, Emerald, ASME, Ebsco, ASCE, IOP and AMS databases are placed in second to thirteenth positions.

Khalili and Matlabi (2010) examined the faculty members' the use and satisfaction with the subscribed databases of Urmia University of Medical Sciences. Using a questionarre, they concluded that the use rate of these bases varies among faculty members, and IranMedex databases has the most usage (13.6%) among the university's subscribed databases, and the Timeh database has the lowest usage (1.4%). The satisfaction with databases is in average level based on charactristics such as being up-to-date databases, the number of databases, the adaption of databases with specialized needs, and the quality of bases' information. The main purpose of using databases is to conduct research activities (21.4%). The communication lines' low speed with (23.6%) is the most serious problem and the lack of familiarity with foreign languages (2.2%) is the least importanceTherefore, according to the role of databases or e-journals in promoting the updated information of academic users and publishing scientific research at the university and at the national and international levels, this thesis investigates the use rate of shared databases by the faculty members and graduate students of Shahid Beheshti University to provide solutions to complete existing studies.

Research method

The current study was applied in terms of purpose and was survey-webometrics in terms of method. The population consisted of the 780 people of faculty members and 2,300 people of graduate students of Shahid Beheshti University. Sampling method was a stratified random method and the sample size was determined using Morgan sampling table. Shahed Beheshti University's studied shared databases in this study included:

Farsi databases like Civilica and Magiran and Latin databases like ACM, ACS, APS, ASCE, ASME, Cambridge jornals, EBSCOHOST, Emerald, IEEE, SAGE, ScienceDirect, Scopus, Springer, web of science, WILEY online library, IOP, JSTOR, MathSciNet, OXFORD, RSC.

The sample size consisted of 330 people of graduate students and 266 people of faculty members. In this study, to cellect data, we used two methods of distributing the questionnaire and analyzing the web report. We used a researcher-made questionnaire to collect data. After assessing this questionnaire by

some experts of knowledge and information science confirming its validity, we calculated the reliability of the questionnaire by Cronbach's alpha coefficient, which was 0.83. To analyze the data, we used descriptive and inferential statistics such as frequency and percentage, Chi-square and Friedman tests. The SPSS software was used in this study. In order to investigate the use rate of the Latin and Farsi shared databases in Shahid Beheshti University, we used the log files of these databases were obtained from the central library server.

Findings

Table 1 illustrates the frequency and percentage of graduate students. There are 87.5% of students with master's degree.

Table1. Frequency distribution of students based on the variables of the grade

	Levels	**Frequency**	**Percentage**
Academic Rank	Master of Art	289	87.5%
	Ph.D.	41	12.5%

Table 3 - Frequency distribution of samples based on the academic rank of faculty members

	Levels	**Frequency**	Percentage
Academic Rank	Instructor	22	8.4%
	Associate Professor	63	24.3%
	Assistant Professor	170	65.4%
	Professor	5	1.9%

Answer to the first question of research

1. To what extent do the faculty members and graduate students of Shahid Beheshti University use shared databases?

As shown in Table 4, the first option (very low) has been selected by 65% of the faculty members and 13.3% of the students selected.

Table 4: Stratified frequency distribution of the use rate of shared databases by faculty members and graduate students

	Frequency		Percentage	
Options	Professor	Student	Professor	Student
Very low	40	44	65%	13.3%
Low	56	50	21.5%	15%
Moderate	100	124	38.3%	37.5%
Much	70	88	27.1%	26.7%
Too much	17	25	6.5%	7.5%
Total	260	330	100%	100%

Table 5 - Inferential statistics indicators used for analyzing the Chi-square test

population	Number	x^2	Degrees of freedom	Significance level
Faculty Members	260	80.3	4	P<0.01
Graduate students	330	103.8	4	P<0.01

According to the results of Table 5, it can be concluded that there is a significant difference between the expected frequency and frequency of observing the variable of the use rate of shared databases in the sample (both faculty members and graduate students).

Table 6. Stratified frequency distribution of reasons for using shared databases by faculty members and graduate students.

	Ranks Average

Reasons	Professor	Student
Availability of e-resources	3.79	3.95
Quickly searching and retrieving information	4.07	4.04
Access to up-to-date information	4.61	4.47
No search restriction if others use the base	3.84	3.63
Feasibility of saving required information on the computer	4.12	4.32
High quality electronic resources	3.72	3.81
Not having time and space restrictions on receiving electronic resources	3.85	3.79

As seen in Table 6, the access to up-to-date information is the most important reason to use shared databases by faculty members and graduate students.

Answer to second question of research

How much is the rate of successful of user interact with shared databases?

Table7. Stratified frequency Distribution of studied variable in faculty members and students

	Frequency		Percentage	
Options	Professor	Student	Professor	Student
Very low	27	22	10.3%	6.7%
Low	56	58	21.5%	17.5%
Moderate	90	171	34.6%	51.7%
Much	70	72	27.1%	21.7%
Too much	17	8	6.5%	2.5%

Total	260	330	100%	100%

Table 7 presents the relavant frequency and percentage of each selected option by faculty members and graduate students. The first option (very low) has been selected by 3.10% of the faculty members and 6.7% of the students.

Answer to the third question of research

To what extent are the needs of faculty members and graduate students of Shahid Beheshti University met by shared databases?

Table 8. Stratified frequency Distribution of studied variable in faculty members and students

	Frequency		Percentage	
Options	Professor	Student	Professor	Student
Very low	24	14	9.3%	4.2%
Low	34	25	13.1%	7.5%
Moderate	95	162	36.4%	49.2%
Much	87	110	33.6%	33.3%
Too much	19	19	7.5%	5.8%
Total	260	330	100%	100%

Table 8 illustrates the relevant frequency and percentage of each option selected by faculty members and graduate students. The option of (very low) has been selected by 33.6% of the faculty members and 33.3% of the students.

Table 9. Inferential statistics indicators used to analyze the Chi-square test

Example	Number	x^2	Degrees of freedom	Significance level
Faculty Members	260	82.9	4	P<0.01

Graduate students	330	294.5	4	P<0.01

According to the results of Table 9, it can be concluded that there is a significant difference between the expected frequency and frequency of observing the variable of the use rate of shared databases in the sample. The option (higher t5han moderate) has been selected by faculty members and graduate students.

Answer to the fourth question of research

What is the main motive to search information in shared databases by faculty members and graduate students of Shahid Beheshti University?

Table 10 - The ranks average of studied variable in faculty members and graduate students

Ranks Average		
The motivation to search information in shared databases	Professor	Student
Obtaining specialized information	3.99	4.40
Writing and translating books and articles	4.66	4.46
Enhanceing personal and professional information	4.48	4.57
Preparation for teaching and improving the teaching quality	5.06	4.69
Participating in domestic and foreign conferences	4.75	4.94
Maintaining professional and specialized competence	5.31	5.19
Holding and attending in workshops	5.67	5.74
Executive tasks	5.35	5.42
Conducting research projects and patent and exploration	5.73	5.60

As shown in Table 10, conducting research projects and patent and exploration are the most important motivation to search information in shared databases faculty members. Helding and attending workshops are the most important motivation of graduate students to search information in shared databases.

Answer to the fifth question of research

What are the restrictive factors in the optimal use of shared databases by faculty members and graduate students of Shahid Beheshti University?

Table 11 shows that unfamiliarity with databases and how to search are the most important restrictive factor of faculty members for optimal use of shared databases, and for graduate students, unawareness of the existence of databases is the most important restrictive factor.

Table 11. The ranks average of the studied variables in faculty members and graduate students

Ranks Average		
The restrictive factor in the optimal use of shared databases	Professor	Student
Unawareness of the existence of bases	4.87	5.05
Non-relevance the existing information in the database to the information needs	4.82	4.77
Unfamiliar with the bases and how to search	5.23	5.03
time limitation	4.43	4.32
The lack of access to past ages	4.70	4.61
The lack of feeling need to use bases	3.04	3.29
The lack of easy access to the internet	5.19	4.39
Unfamiliar with foreign languages	3.75	4.55

Table 12 - Inferential statistics indicators used for Friedman test analysis

Variable	Number	x^2	Degrees of freedom	Significance level
Faculty Members	230	169.6	7	P<0.01
Graduate students	360	162.6	7	P<0.01

According to the results of Table 12, it can be stated that there is a significant difference between the ranks average of the mentioned reasons in the sample (faculty members and graduate students).

Answer to the sixth question of the research

What is the attitude of faculty members and graduate students of Shahid Beheshti University towards the need for traning to use the shared databases?

As shown in Table 13, from the faculty point of view, to get help from colleagues is the most important method to train the optimal use of database, and from the graduate students's view is the training method by software packages or reading guides and brochures.

Table 13 - The ranks average of the studied variables in faculty members and graduate students

	Ranks Average	
Methods of training the best use of databases	Professor	Student
Attending in classrooms and training wortkshops	2.52	2.88
To get help from librarians	2.81	2.97
Training by software packages	2.66	3.08
Reading guides and brochures	3.00	3.06
To get help from colleagues or classmates	4.01	3.02

Answer to the seventh question of research

What is the degree of satisfaction from the Shahid Beheshti University's shared databases by faculty members and graduate students of this university?

Table 14. Stratified frequency distribution of the use rate of shared databases by faculty members and graduate students

	Frequency		Percentage	
Options	Professor	Student	Professor	Student

Very low	34	36	13.1%	10.8%
Low	29	33	11.2%	10%
Moderate	122	198	46.7%	60%
Much	73	52	28%	15.8%
Too much	2	11	0.9%	3.3%
Total	260	330	100%	100%

Table 14 shows the relevant frequency and percentage of each option selected by faculty members and graduate student. The fourth option (high) has been selected by 28% of the faculty members and 15.8% of the students.

Table 15. Inferential statistics indicators used for analyzing the Chi-square test

Sample	Number	X^2	Degrees of freedom	Significance level
Faculty Members	260	135.6	4	P <0.01
Graduate students	330	374.3	4	P <0.01

Table 15 shows that there is a significant difference between the expected frequency and frequency of observing theis variable in the sample (faculty members and graduate students).

Answer to the eighth question of research

How are the use rate of Farsi and Latin shared databases in Shahid Beheshti University?

To answer this question, we used log files from the central library of Shahid Beheshti University. The studies showed that the rate of loaded articles from the Civilica database during the first semester of 2014 to the first semester of 2015, were 1394 and 25672 articles, respectively, and was 32094 articles for the Magiran base.

Table 15. The use rate of Latin shared Databases at Shahid Beheshti University

Database name	The rate of Loaded articles
MathSciNet	163
ScienceDirect	13362
Springer	8062
WILEY online library	5052
Scopus	5378
JSTOR	4863
EBSCOHOST	4241
Emerald	3394
web of science	2285
IEEE	2191
OXFORD	1653
Cambridge	1501
SAGE	1248
ACS	934
IOP	595
ASCE	569
ACM	424
APS	402
RSC	381
AIP	357
ASME	188

Increasingly, it determines that, among the Latin databases, ScienceDirect has most used with 13,362 downloads, and among the Farsi databases, Magiran has most used with 32094 downloads; also among all of the Latin and Farsi databases, Magiran has most used. Among the Latin databases, MathSciNet has least use with 163 downloads. Among the Farsi databases, Ciavilla database with 25,672 downloads has the lowest use compared to Magiran database.

Discussion and conclusion

About the satisfaction rate of the respondents from Shahid Beheshti University's shared databases, the results showed that the satisfaction rate was high and at the desired level. In a tudy on the faculty members of Iran's medical sciences universities from specialized databases, Salajegeh (2010) expressed there is a high satisfaction rate from databases. The users' satisfaction from databases or e-journals may be related to various reasons, including the ease of use, the quality of information, the database information related to the requested subject, the accuracy of search, up-to-date information, or perhaps the suitability of their number. The log files of Farsi and Latin databases (as the number of articles downloaded from the databases as PDFs) showed that ScienceDirect has been most used among the Latin databases, Magiran has been most used among the Farsi databases; also, Magiran has been most used among all the Latin and Farsi databases. MathSciNet has been less used among the Latin bases and Ciolica has been less used compared to Magiran among the Farsi databases. Several databases are provided by universities and research centers (depending on their activities) for the user community. The huge volume of provided databases in the world, these centers are forced to select by financial constraints, and the facilities of universities and research centers. In fact, the base selection is based on the scientific needs of the user community, the comprehensiveness, quality and reliability of the information, as well as to be update the information in them (Khalili, 2013, p. 27). Khaseh and Hatami (2005) showed the positive attitude of the faculty members of the faculty of human sciences of Shiraz University towards the databases such as ScienceDirect, Elsevier, and ISI, which are respectively the most used databases by faculty members of human sciences of Shiraz University. According to Atakan, C, et al. (2008), the most used databases by faculty members at Ankara University were: WEB OF SCIENCE, ScienceDirect and Ebsco. In a study on faculty members at Ankara University, Atilgan and Bayram (2006) concluded that the more popular databases of these individuals were ISI, ABC, ScienceDirect. Davar Panah (2010) also expressed, among its six studied databases, Elsevier has the highest use rate, and Oxford has the lowest use rate. In Rajabi's research (2009), Jstor database placed in highest position in terms of the number of downloaded articles. In a research on graduate students at Bu-Ali Sina University in Hamedan, Latifi and Osareh (2010) concluded that the significance of the ScienceDirect and Elsevier database is higher among the existing electronic databases. The result of this section of the study that the ScienceDirect has the highest use rate in comparison with other bases is consistent with the results of Khaseh and Hatami (2005), Atilegan and Bayram (2006), Latifi and Osareh (2010) and, in part, with the results of Hayati and Hassan Shahi (2008), Atakan et al. (2008). It should be noted that Slmani Nadooshan et al. (2008) and Latifi and Osareh (2010) used the questionnaire to determine the use rate of databases. We used the log files in this section of the study; also, the results

of this section of the study are not consistent with the results of Davar Panah (2010) and Rajabi (2009). This may be due to the lack of uniformity or diversity of shared databases in each university; also, it may not be reasonable to compare in this case, since selecting e-journals in each university depends on the size of each university's budget and its policy, but ScienceDirectories database has the high use rate among all the databases and in most of the previous studies. It can be guessed accurately using the log files to determine the bases with more and less usage rather the questionnaire; because it is clear that users cannot accurately determine in the questionnaire which bases are used less or more, but can not be stated that the log files are perfect because the log files show the number of download articles as PDF and it is not possible to determin the use rate of these databases just that the articles have been downloaded from the databases.

The current study showed that the most users of the students are the students of master's degree with 87.5%. The results of Tenner, E. and Z.Y. (Lan) Yang (1999) showed that faculty members with associate professors used e-journals more than faculty members and professors. The results of Salajegeh (2010) are based on the use of e-journals and specialized databases, and the existence of a relationship between scientific rank using information centers. The results indicate that there is no difference between professors, faculty members and professors about the use of ejournals, and all three groups are the users of these resources. These results were consistent with the results of Tenner and Yang (1999) , but did not consistent with the results of Salajegeh (2010). In this study, most users (10.3% of faculty members) are computer science specialist. Kayaoglu (2008) reviewed the use of e-journals on faculty members at Istanbul University in Turkey. The users of these resources were more the student of basic science and medical, used them for training, flipping, research and updating themselves, and the students of human sciences did not use the resources. In the age of technology and information, computer science, like medical disciplines, is encountered fundamental change; so, researchers in this field need new information in their area of expertise. Hence, databases can meet this that allow the use of new information in e-journals for individuals. In contrast, the law faculty has least used databases with a score of 5.0%. One of the possible reasons for this may be the same reason about students of human sciences, which may be due to the excessive attachment of expertise or discipline to relevant previous sources. Thus, this study aimed to investigate the use rate of Shahid Beheshti University's shared databases by faculty members and graduate students of this university that partially satisfies the need of this research community, i.e., in this study, the important indicators of measuring the usefulness of databases, including the use rate and satisfaction of databases, the degree of satisfying the users' needs by databases, and the rate of users' success for interacting with these bases, are in moderate

level in term of users (not at a low level or at a high level). Except ScienceDirect and Magiran and Civilica databases, most databases are used slightly, one of the possible reasons for this is the comprehensiveness of these databases or becoming more known by the educational system. These databases (less-used bases) primarily require informing by librarians and the knowledge and information science's experts and training by academic educational centers through experienced professors; otherwise, it is necessary to disconnect these databases and replace the more appropriate databases. Such an action will increase the number of readers and enhance their use rate; also, it will greatly decreased the university costs. It should also be noted that quantity often is more reffered quality, for this purpose it possible to make an alternative policy to cost-effective databases; i.e., it can be replaced the costs of subscribing in a number of least-used databases with training the use of useful databases, that is, the quality is replaced the quantity.

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